Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1 - 23 (canceled)

Claim 24 (previously presented): A method for coding transform coefficients, the method being performed by a computer programmed to perform,

for blocks of (video) pictures containing transform coefficients being unequal to zero, a coding of transform coefficients takes place in such a way that, for each block,

a significance map is coded, the significance map specifying the positions of transform coefficients being unequal to zero in the block in a scan order in a context-dependent way using contexts depending on the corresponding scan position of the transform coefficient considered, and subsequently,

the values (levels) of the transform coefficients being unequal to zero are coded by, in a reverse scan order - starting with the last transform coefficient being unequal to zero within the block - binary arithmetically

coding bins of a binarization of a magnitude of the transform coefficients being unequal to zero in a context-dependent way using contexts depending on how many transform coefficients having a magnitude of 1 have already been coded in the reverse scan order up to a respective currently coded transform coefficient, and how many transform coefficients having a magnitude of greater than 1 have already been coded in the reverse scan order up to the respective currently coded transform coefficient, with coding all bins of the binarization of the respective currently to be coded transform coefficient being unequal to zero before proceeding with coding the bins of the binarization of a - in the reverse scan order -succeeding transform coefficient being unequal to zero.

Claim 25 (previously presented): The method according to claim 24,

wherein

when coding the significance map, each transform coefficient being unequal to zero in the scan order is characterized by a first one-bit symbol (SIG) serving to characterize transform coefficients being unequal to zero, i.e. each transform

coefficient being unequal to zero including the last transform coefficient being unequal to zero in the scan order if it is different from the last transform coefficient of the block in the scan order, or excluding the last transform coefficient being unequal to zero in the scan order if it is the last transform coefficient of the block in the scan order, and the last transform coefficient being unequal to zero is characterized by a second one-bit symbol (LAST) indicating that the respective transform coefficient being unequal to zero is the last transform coefficient being unequal to zero in the scan order if it is different from the last transform coefficient of the block in the scan order.

Claim 26 (previously presented): The method according to claim 24,

wherein

for each transform coefficient being unequal to zero, the sign is indicated by a one-bit symbol (SIGN) and the magnitude is indicated by a binary-coded symbol (ABS) .

Claim 27 (previously presented): The method according to claim 24,

wherein

the magnitude is indicated by a symbol (ABS) in unary binarization or by a symbol (ABS) having a prefix part and a suffix part, wherein the prefix part consists of ones and the suffix part is coded in a 0th order exp-golomb code.

Claim 28 (previously presented): The method according to claim 24,

wherein

blocks containing transform coefficients being unequal to zero are characterized by a one-bit symbol (CBP4) in connection with further syntax elements, including, (CBP) or macro block mode.

Claim 29 (previously presented): The method according to claim 24,

wherein

by transferring a one-bit symbol (SIG) for each coefficient of a block and a one-bit symbol (LAST) for each transform coefficient being unequal to zero of a block, the significance

map is coded, wherein the transfer takes place in the scan order, (SIG) serves for identifying transform coefficients being unequal to zero and (LAST) indicates whether there are further transform coefficients being unequal to zero in the block.

Claim 30 (previously presented): The method according to claim 28,

wherein

modeling

for the one-bit symbol (CBP4),
for coding the significance map and/or
for coding the coefficient magnitudes

takes place in a context-dependent way.

Claim 31 (previously presented): The method according to claim 29,

wherein

no significance information (SIG, LAST) is transferred for the

last scan position of a block.

Claim 32 (previously presented): The method according to claim 24,

wherein

block types of transform coefficients having comparable statistics are summarized to block categories.

Claim 33 (previously presented): A video coder having at least one processor and/or chip formed such that a method for coding transform coefficients can be performed, wherein

for blocks of (video) pictures containing transform coefficients being unequal to zero, a coding of transform coefficients takes place in such a way that, for each block,

a significance map is coded, the significance map specifying the positions of transform coefficients being unequal to zero in the block in a scan order in a context-dependent way using contexts depending on the corresponding scan position of the transform coefficient considered, and subsequently,

the values (levels) of the transform coefficients being unequal to zero are coded by, in a reverse scan order - starting with the last transform coefficient being unequal to zero within the block - binary arithmetically coding bins of a binarization of a magnitude of the transform coefficients being unequal to zero in a context-dependent way using contexts depending on how many transform coefficients having a magnitude of 1 have already been coded in the reverse scan order up to a respective currently coded transform coefficient, and how many transform coefficients having a magnitude of greater than 1 have already been coded in the reverse scan order up to the respective currently coded transform coefficient, respectively, with coding all bins of the binarization of the respective currently to be coded transform coefficient being unequal to zero before proceeding with coding the bins of the binarization of a - in the reverse scan order -succeeding transform coefficient being unequal to zero.

Claim 34 (previously presented): A computer program, stored on a computer readable storage medium and executable by a computer to perform a method for coding transform coefficients, wherein

for blocks of (video) pictures containing transform coefficients being unequal to zero, a coding of transform coefficients takes place in such a way that, for each block,

a significance map is coded, the significance map specifying the positions of transform coefficients being unequal to zero in the block in a scan order in a context-dependent way using contexts depending on the corresponding scan position of the transform coefficient considered, and subsequently,

the values (levels) of the transform coefficients being unequal to zero are coded by, in a reverse scan order - starting with the last transform coefficient being unequal to zero within the block - binary arithmetically coding bins of a binarization of a magnitude of the transform coefficients being unequal to zero in a context-dependent way using contexts depending on how many transform coefficients having a magnitude of 1 have already been coded in the reverse scan order up to a respective currently coded transform coefficient, and how many transform coefficients having a magnitude of greater than 1 have already been coded in the reverse scan order up to the respective currently coded transform coefficient, respectively, with coding all bins of the binarization of the respective currently to be coded

transform coefficient being unequal to zero before proceeding with coding the bins of the binarization of a - in the reverse scan order -succeeding transform coefficient being unequal to zero.

Claim 35 (previously presented): A computer-readable storage medium ~~a~~ having a computer program stored thereon, said computer program executable by a computer to perform a method for coding transform coefficients, wherein

for blocks of (video) pictures containing transform coefficients being unequal to zero, a coding of transform coefficients takes place in such a way that, for each block,

a significance map is coded, the significance map specifying the positions of transform coefficients being unequal to zero in the block in a scan order in a context-dependent way using contexts depending on the corresponding scan position of the transform coefficient considered, and subsequently,

the values (levels) of the transform coefficients being unequal to zero are coded by, in a reverse scan order - starting with the last transform coefficient being unequal to zero within the block - binary arithmetically coding bins of a binarization of a magnitude of the

transform coefficients being unequal to zero in a context-dependent way using contexts depending on how many transform coefficients having a magnitude of 1 have already been coded in the reverse scan order up to a respective currently coded transform coefficient, and how many transform coefficients having a magnitude of greater than 1 have already been coded in the reverse scan order up to the respective currently coded transform coefficient, respectively, with coding all bins of the binarization of the respective currently to be coded transform coefficient being unequal to zero before proceeding with coding the bins of the binarization of a - in the reverse scan order -succeeding transform coefficient being unequal to zero.

Claim 36 (previously presented): A computer program stored in a computer memory and executable by a computer to perform a method for coding transform coefficients, wherein

for blocks of (video) pictures containing transform coefficients being unequal to zero, a coding of transform coefficients takes place in such a way that, for each block,

a significance map is coded, the significance map specifying the positions of transform coefficients being

unequal to zero in the block in a scan order in a context-dependent way using contexts depending on the corresponding scan position of the transform coefficient considered, and subsequently,

the values (levels) of the transform coefficients being unequal to zero are coded by, in a reverse scan order - starting with the last transform coefficient being unequal to zero within the block - binary arithmetically coding bins of a binarization of a magnitude of the transform coefficients being unequal to zero in a context-dependent way using contexts depending on how many transform coefficients having a magnitude of 1 have already been coded in the reverse scan order up to a respective currently coded transform coefficient, and how many transform coefficients having a magnitude of greater than 1 have already been coded in the reverse scan order up to the respective currently coded transform coefficient, respectively, with coding all bins of the binarization of the respective currently to be coded transform coefficient being unequal to zero before proceeding with coding the bins of the binarization of a - in the reverse scan order -succeeding transform coefficient being unequal to zero.

Claim 37 (currently amended): A method for decoding a coding of a significance map and a subsequent coding of values of transform coefficients being unequal to zero for blocks of (video) pictures containing transform coefficients being unequal to zero, the significance map specifying the positions of the transform coefficients being unequal to zero in a scan order, and the coding of values of transform coefficients being unequal to zero comprising coded values of the transform coefficients being unequal to zero in a reverse scan order - starting with the last transform coefficient being unequal to zero, comprising the steps of:

decoding the significance mapping in a context-dependent way in the scan order using contexts depending on the corresponding scan position of the transform coefficient considered; and

decoding the coded values of transform coefficients being unequal to zero, using a computer programmed to perform the decoding, by, in the reverse scan order, binary arithmetically decoding bins of a binarization of a magnitude of the transform coefficients being unequal to zero in a context-dependent way using contexts depending on how many transform coefficients having a magnitude of 1 have already been decoded in the reverse scan order up to a respective currently decoded

transform coefficient, and how many transform coefficients having a magnitude of greater than 1 have already been decoded in the reverse scan order up to the respective currently decoded transform coefficient, respectively, with decoding all bins of the binarization of the respective currently to be ~~coded~~ decoded transform coefficient being unequal to zero before proceeding with decoding the bins of the binarization of a - in the reverse scan order - succeeding transform coefficient being unequal to zero.

Claim 38 (currently amended): A device for decoding a coding of a significance map and a subsequent coding of values of transform coefficients being unequal to zero for blocks of (video) pictures containing transform coefficients being unequal to zero, the significance map specifying the positions of the transform coefficients being unequal to zero in a scan order, and the coding of values of transform coefficients being unequal to zero comprising coded values of the transform coefficients being unequal to zero in a reverse scan order - starting with the last transform coefficient being unequal to zero, the device comprising a processor for

decoding the significance mapping in the scan order in a context-dependent way using contexts depending on the corresponding scan position of the transform coefficient

considered; and

decoding the coded values of transform coefficients being unequal to zero by, in the reverse scan order, binary arithmetically decoding bins of a binarization of a magnitude of the transform coefficients being unequal to zero in a context-dependent way using contexts depending on how many transform coefficients having a magnitude of 1 have already been decoded in the reverse scan order up to a respective currently decoded transform coefficient, and how many transform coefficients having a magnitude of greater than 1 have already been decoded in the reverse scan order up to the respective currently decoded transform coefficient, respectively, with decoding all bins of the binarization of the respective currently to be ~~coded~~ decoded transform coefficient being unequal to zero before proceeding with decoding the bins of the binarization of a - in the reverse scan order - succeeding transform coefficient being unequal to zero.

Claim 39 (previously presented): The method according to claim 37, wherein decoding the transform coefficients in the reverse scan order comprises

decoding bins of a binarization of a magnitude of each transform coefficient,

determining a context for the first bin of the magnitude of each transform coefficient based on a number of transform coefficients already decoded in the reverse scan order having a magnitude of 1,

context-adaptively decoding the first bins of the transform coefficients using the determined contexts.

Claim 40 (previously presented): The method according to claim 39, wherein the determination of a context for the first bin of the magnitude of each transform coefficient is performed such that a first predetermined context is used as soon as more than three transform coefficients with a magnitude of 1 have been decoded, and a second predetermined context for all remaining transform coefficients being unequal to zero within the block is used, as soon as a transform coefficient having a magnitude greater than 1 has been decoded.

Claim 41 (previously presented): The method according to claim 39, wherein decoding the transform coefficients in the reverse scan order also comprises

determining a context number for a second to fourteenth bin of the magnitude of each transform coefficient by a number of transform coefficients already decoded in the reverse scan order having a magnitude of greater than 1;

context-adaptively decoding the second to fourteenth bins of the transform coefficients using the context numbers determined.

Claim 42 (previously presented): The method according to claim 39, wherein decoding the transform coefficients in the reverse scan order also comprises

decoding x-th bins with x>14 of the magnitude of the transform coefficients using a non-adaptive context.

Claim 43 (previously presented): The method according to claim 37, wherein decoding the significance mapping comprises decoding the symbols SIG and LAST context-adaptively by use of context numbers indicated by the corresponding scan position of the transform coefficient considered, with the context numbers for SIG and LAST being different.

Claim 44 (previously presented): The method according to claim 24, wherein coding the significance mapping and coding the values of the transform coefficients is performed by arithmetical coding.

Claims 45 - 46 (canceled)

Claim 47 (currently amended): A device for decoding a coding of a significance map and a subsequent coding of values of transform coefficients being unequal to zero for blocks of (video) pictures containing transform coefficients being unequal to zero, the significance map specifying the positions of the transform coefficients being unequal to zero in a scan order, and the coding of values of transform coefficients being unequal to zero comprising coded values of the transform coefficients being unequal to zero in a reverse scan order-starting with the last transform coefficient being unequal to zero, the device comprising:

means for decoding the significance mapping in the scan order in a context-dependent way using contexts depending on the corresponding scan position of the transform coefficient considered; and

means for decoding the coded values of transform coefficients being unequal to zero by, in the reverse scan order, binary arithmetically decoding bins of a binarization of a magnitude of the transform coefficients being unequal to zero in a context-dependent way using contexts depending on how many transform coefficients having a magnitude of 1 have already been decoded in the reverse scan order up to a respective currently decoded transform coefficient, and how many transform coefficients having a magnitude of greater than 1 have already been decoded in the reverse scan order up to the respective currently decoded transform coefficient, respectively, with decoding all bins of the binarization of the respective currently to be ~~coded~~ decoded transform coefficient being unequal to zero before proceeding with decoding the bins of the binarization of a - in the reverse scan order - succeeding transform coefficient being unequal to zero.

Claim 48 (currently amended): Video decoder for decoding a coding of a significance map and a subsequent coding of values of transform coefficients being unequal to zero for blocks of (video) pictures containing transform coefficients being unequal to zero, the significance map specifying the positions of the transform coefficients being unequal to zero in a scan order, and the coding of values of transform coefficients

being unequal to zero comprising coded values of the transform coefficients being unequal to zero in a reverse scan order starting with the last transform coefficient being unequal to zero, the video decoder having at least one processor and/or chip being configured to

decode the significance mapping in the scan order in a context-dependent way using contexts depending on the corresponding scan position of the transform coefficient considered; and

decode the coded values of transform coefficients being unequal to zero by, in the reverse scan order, binary arithmetically decoding bins of a binarization of a magnitude of the transform coefficients being unequal to zero in a context-dependent way using contexts depending on how many transform coefficients having a magnitude of 1 have already been decoded in the reverse scan order up to a respective currently decoded transform coefficient, and how many transform coefficients having a magnitude of greater than 1 have already been decoded in the reverse scan order up to the respective currently decoded transform coefficient, respectively, with decoding all bins of the binarization of the respective currently to be ~~coded~~ decoded transform coefficient being unequal to zero before proceeding with

decoding the bins of the binarization of a - in the reverse scan order -succeeding transform coefficient being unequal to zero.